

Supplemental Material

A Longitudinal Cohort Study of Body Mass Index and Childhood Exposure to Secondhand Tobacco Smoke and Air Pollution: The Southern California Children's Health Study

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Table S1. Selected personal, household and neighborhood characteristics of participant residences at study entry.

Characteristic	No. (%) or mean \pm SD^a	BMI mean \pm SD (kg/m²)
Individual and household characteristics		
<i>Ever asthma</i>		
No	2775 (85.8)	18.3 \pm 3.4
Yes	459 (14.2)	18.8 \pm 3.9
<i>Play team sports</i>		
No	1475 (46.0)	18.5 \pm 3.7
Yes	1731 (54.0)	18.2 \pm 3.3
<i>Health insurance for child</i>		
No	462 (15.0)	18.7 \pm 3.7
Yes	2629 (85.0)	18.3 \pm 3.4
<i>Foreign born</i>		
No	3059 (93.4)	18.3 \pm 3.5
Yes	216 (6.6)	18.5 \pm 3.4
<i>Responding parental education</i>		
High school or less	1055 (33.2)	18.6 \pm 3.6
Some college	1417 (44.6)	18.2 \pm 3.5
College	705 (22.2)	18.1 \pm 3.1
<i>Language of questionnaire</i>		
Spanish	175 (5.5)	19.2 \pm 3.9
English	2998 (94.5)	18.3 \pm 3.4
Local environment		
<i>Having a restaurant or food store within 500 m road network buffer</i>		
No	2333 (73.8)	18.2 \pm 3.3
Yes	826 (26.2)	18.9 \pm 3.9
<i>Population density (in 500m buffer)</i>	1256 \pm 1121	
<i>Proportion unemployed in census block of home</i>	0.05 \pm 0.04	
<i>Proportion in poverty in census block of home</i>	0.08 \pm 0.09	
<i>Parks and recreation (acres in 500 m buffer)</i>	5.6 \pm 13.9	
<i>Normalized Difference Vegetation Index (in 500 m buffer)</i>	0.06 \pm 0.08	

^aFor the first observation of the participant (N=3318); denominator varies due to missing covariates values.

Table S2. Associations of mutually adjusted secondhand (SHS) and in utero exposures^a to tobacco smoke with BMI growth over 8 years and with attained BMI at age 18.

Exposure	BMI growth^b (95% CI)	Difference in attained BMI^b (95% CI)
SHS	0.81 (0.36, 1.27) ^d	1.23 (0.86, 1.60) ^d
SHS adjusted for <i>in utero</i> exposure	0.69 (0.19, 1.20) ^c	1.04 (0.62, 1.45) ^d
<i>In utero</i> exposure	0.74 (0.16, 1.32)	1.15 (0.67, 1.63) ^d
<i>In utero</i> exposure adjusted for SHS	0.35 (-0.29, 0.99)	0.58 (0.05, 1.11)

^aExposure prior to or at enrollment at average age 10; (N=3164 with information on both exposures). ^bBMI growth (in kg/m²) over 8-year follow-up, and difference in attained BMI at age 18, compared with participants without tobacco smoke exposure, adjusted for ethnicity, gender, community, year of enrollment, and age. ^cP<0.01. ^dP<0.001.

Table S3. Fully adjusted associations of sources of tobacco smoke and near-roadway pollution (NRP) exposures^a at study enrollment with BMI growth over 8 years and with attained BMI at age 18.

Exposure	BMI growth^b (95% CI) From Table 2	BMI growth^c (95% CI) Fully Adjusted	Difference in attained BMI^b (95% CI) From Table 2	Difference in attained BMI^c (95% CI) Fully Adjusted
SHS ^d	0.81 (0.36, 1.27) ^d	0.80 (0.35, 1.26) ^e	1.23 (0.86, 1.61) ^e	1.18 (0.81, 1.55) ^e
Maternal smoking during pregnancy ^d	0.72 (0.14, 1.31) ^d	0.72 (-0.14, 1.29) ^e	1.14 (0.66, 1.61) ^e	1.10 (0.62, 1.57) ^e
NRP ^d	1.13 (0.61, 1.65) ^d	0.99 (0.46, 1.51) ^e	1.27 (0.75, 1.80) ^e	1.10 (0.58, 1.61) ^e

^aExposure prior to or at enrollment at average age 10. ^bBMI growth (in kg/m²) over 8-year follow-up, and difference in attained BMI at age 18, compared with participants without tobacco smoke exposure, or scaled to NRP 10th-90th percentile range of 16.8 ppb of NO_x, adjusted for ethnicity, gender, community, year of enrollment, and age; NRP exposure restricted to 11 communities. ^cAssociations further adjusted for child health insurance, no food outlet within 500 m road network residence buffer, and percent poverty in the census block; all analysis restricted to 11 communities. ^dN for SHS=3164; for maternal smoking during pregnancy 3318; for NRP 2944. ^eP<0.001.

Table S4. Characteristics of participants included in analysis (with two or more BMI measurements) and not included (with one measurement).

Socio-demographic characteristics	Included (N=3318) Mean (kg/m²) ± SD*	Not included (N=569) Mean (kg/m²) ± SD*
<i>Health insurance for child</i>	2739 ± 85.0	431 ± 79.2
<i>Foreign born child</i>	216 ± 6.6	57 ± 10.0
<i>Race/ethnicity</i>		
African American	155 ± 4.7	44 ± 7.3
Asian	151 ± 4.5	14 ± 2.5
Hispanic White	1000 ± 30.1	170 ± 29.9
White, Non-Hispanic	1825 ± 55.0	283 ± 49.7
Other	187 ± 5.6	58 ± 10.6
<i>Responding parental education</i>		
High school or less	1055 ± 33.2	211 ± 39.7
Some college	1417 ± 44.6	238 ± 44.7
College graduate	705 ± 22.2	83 ± 15.6

*For the first observation of the participant (N=3318); denominator varies due to missing covariates values.